

## TECHNICAL MEMORANDUM

DATE: June 30, 2023

Project No.: 270-60-22-20

SENT VIA: EMAIL

TO: Harris Siddiqui  
City of Milpitas Department of Public Works

FROM: Melissa Duffy, PE, RCE #87217

REVIEWED BY: Doug Moore, PE, RCE #58122

SUBJECT: Preliminary Storm Drainage Improvement Impact Fee Analysis



West Yost is pleased to provide the City of Milpitas (City) with this Technical Memorandum (TM) to summarize this Preliminary Storm Drainage Improvement Impact Fee Analysis. Key topics include:

- Background
- Impact Fee Evaluation
- Proposed Impact Fee
- Nexus Summary

While this preliminary analysis provides an estimate and framework for a proposed impact fee based on data available at this time, additional data will be required to provide an adequate impact fee assessment. The Gateway – Main Street Specific Plan (GSP) is currently being developed, which may require additional storm drain infrastructure to be included in the calculation of a proposed impact fee. In addition, the proposed impact fee should be based on providing 100-year flood protection to the City. The Capital Improvement Projects (CIPs) identified in the 2021 Storm Drain Master Plan (SDMP) are based on the 10-year design storm.

### BACKGROUND

Stormwater runoff in the City is collected in a system of gutters, underground pipes, and open channels flowing to Coyote Creek and ultimately discharging to the San Francisco Bay. The City is experiencing rapid growth, placing strain on the critical aging stormwater infrastructure. Storm Drainage Improvement Impact Fees are a funding tool for the City to recover infrastructure costs related to growth. Impact fees are a one-time charge for new development or redevelopment of property that will impact existing infrastructure or create the need for new infrastructure.

Assembly Bill (AB) 1600 became effective on January 1, 1989, regulating the way that impact fees are imposed on development projects. Based on AB 1600, the agency imposing the impact fees are responsible for the following:

1. Identifying the purpose of the fee
2. Identifying how the fee will be used

3. Showing a reasonable relationship (nexus) between the fee's use and the type of development project on which the fee is imposed
4. Showing a reasonable relationship between the public facility to be constructed and the type of development on which the fee is imposed
5. Accounting for and spending the fees collected only for the purposes and projects specifically used in calculating the fees

In 2021, Schaaf & Wheeler prepared the Milpitas SDMP. The SDMP evaluated the existing storm drain system performance for the 10-year design storm, and CIPs were proposed to alleviate identified flooding problems. The SDMP was used in this preliminary analysis to understand the performance of the existing system and identify the proposed CIP costs for estimating an updated impact fee.

The Santa Clara Valley Water District (Valley Water) is the City's primary partner in managing local stormwater issues. While the City owns, operates, and maintains the underground pipes and culverts, most major waterways and downstream creeks are owned, operated, and maintained by Valley Water. The City also owns, operates, and maintains 13 stormwater pumping stations.

## Specific Plan Areas

The City currently includes two Specific Plan areas: the Milpitas Metro Specific Plan (MMSP) area and the GSP area, each further discussed below.

The public draft MMSP was released in April 2022. The MMSP is a plan for redevelopment of approximately 437 acres in the southern portion of the city, centered around the new Milpitas BART station and the VTA Light Rail system. The MMSP area is almost entirely built out and has adequate storm drain capacity during the 10-year storm event based on the 2021 SDMP, with no identified stormwater CIP projects. However, as stated in the public draft MMSP, the area is subject to flooding during the 100-year storm event due to low ground elevations and flows from upstream areas that cannot be mitigated without major channel improvements. The open channels are owned, operated, and maintained by the Valley Water.

The GSP is currently being developed, with adoption anticipated for late 2023. The GSP area encompasses approximately 600 acres and is focused on infill development and redevelopment in the City's downtown area to revitalize historic Main Street and the Calaveras gateway to become the cultural hub of the city. The GSP area was identified in the 2021 SDMP to be prone to flooding due to high creek levels in the downstream system. These downstream open channels are owned, operated, and maintained by Valley Water. The GSP area includes three low-priority CIP projects and four CIP projects identified to extend the storm drain system to proposed development areas. These extension projects will need to be completed before the construction of the development they will serve.

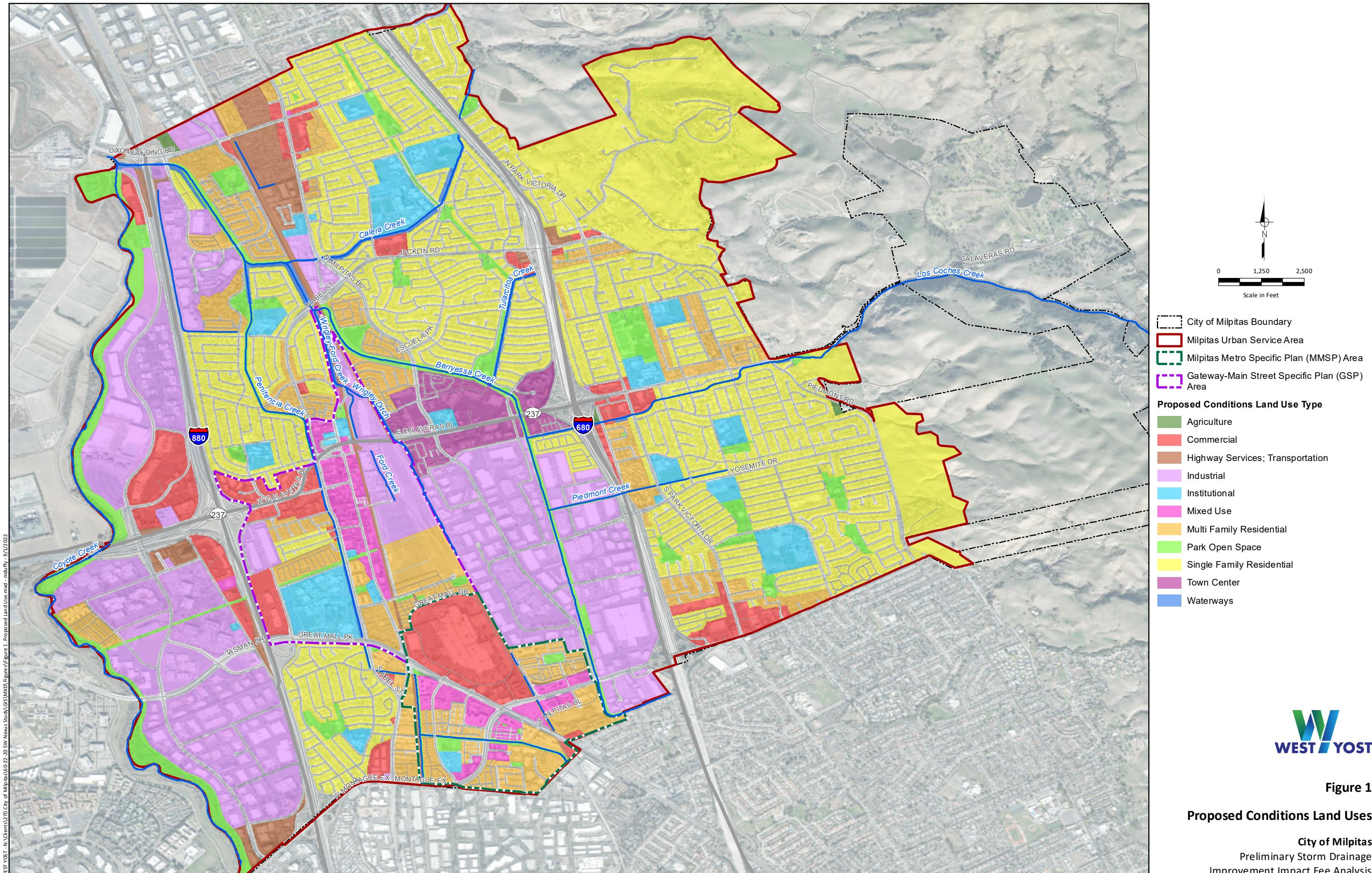
## Land Use Evaluation

During a workshop in May 2022, West Yost and City staff reviewed available land use data from the 2020 Water Master Plan, the 2021 General Plan, the 2021 SDMP, and the zoning provided in GIS format from the City in April 2022. It was confirmed during the workshop that the zoning provided by the City, as shown on Figure 1, should be used as the proposed conditions land uses. West Yost used the proposed conditions land uses and made modifications based on available aerial imagery and data in the City's GIS files for vacant parcels to reflect existing conditions. The City reviewed and approved the existing conditions land uses to be used in this study, as shown on Figure 2. The changes in land use acreage between existing and proposed conditions is summarized in Table 1.

**Table 1. Land Use Summary**

Land Use Type	Impervious Percentage	Area, Acres		
		Existing Conditions	Proposed Conditions	Difference <sup>(a)</sup>
<b>Milpitas Metro Specific Plan (MMSP) Area</b>				
Agriculture	20%	0.0	0.0	0.0
Commercial	90%	130.7	130.7	0.0
Highway Services	95%	0.0	0.0	0.0
Transportation	95%	13.1	13.1	0.0
Industrial	90%	0.1	0.1	0.0
Institutional	90%	6.1	6.1	0.0
Mixed Use	50%	63.2	63.2	0.0
Multi Family Residential	70%	140.6	144.3	3.6
Park Open Space	20%	25.4	21.7	-3.6
Single Family Residential	40%	0.0	0.0	0.0
Town Center	90%	0.0	0.0	0.0
Waterways	0%	0.0	0.0	0.0
<i>Subtotal</i>		379.2	379.2	0.0
<b>Gateway - Main Street Specific Plan (GSP) Area</b>				
Agriculture	20%	0.0	0.0	0.0
Commercial	90%	70.7	77.1	6.4
Highway Services	95%	0.0	0.0	0.0
Transportation	95%	18.4	18.4	0.0
Industrial	90%	154.6	108.3	-46.3
Institutional	90%	72.1	72.1	0.0
Mixed Use	50%	60.4	65.1	4.7
Multi Family Residential	70%	93.3	139.6	46.3
Park Open Space	20%	22.7	11.5	-11.1
Single Family Residential	40%	0.8	0.8	0.0
Town Center	90%	0.0	0.0	0.0
Waterways	0%	10.8	10.8	0.0
<i>Subtotal</i>		503.7	503.7	0.0
<b>Remaining City Urban Service Area</b>				
Agriculture	20%	6.7	6.7	0.0
Commercial	90%	219.2	222.6	3.4
Highway Services	95%	113.1	113.1	0.0
Transportation	95%	36.5	36.5	0.0
Industrial	90%	1287.2	1335.3	48.0
Institutional	90%	224.1	224.1	0.0
Mixed Use	50%	3.0	3.4	0.4
Multi Family Residential	70%	384.2	384.8	0.7
Park Open Space	20%	724.7	393.0	-331.7
Single Family Residential	40%	1972.1	2251.4	279.2
Town Center	90%	132.1	132.1	0.0
Waterways	0%	45.2	45.2	0.0
<i>Subtotal</i>		5148.1	5148.1	0.0

(a) A negative value indicates a reduction from the existing condition to the proposed condition.



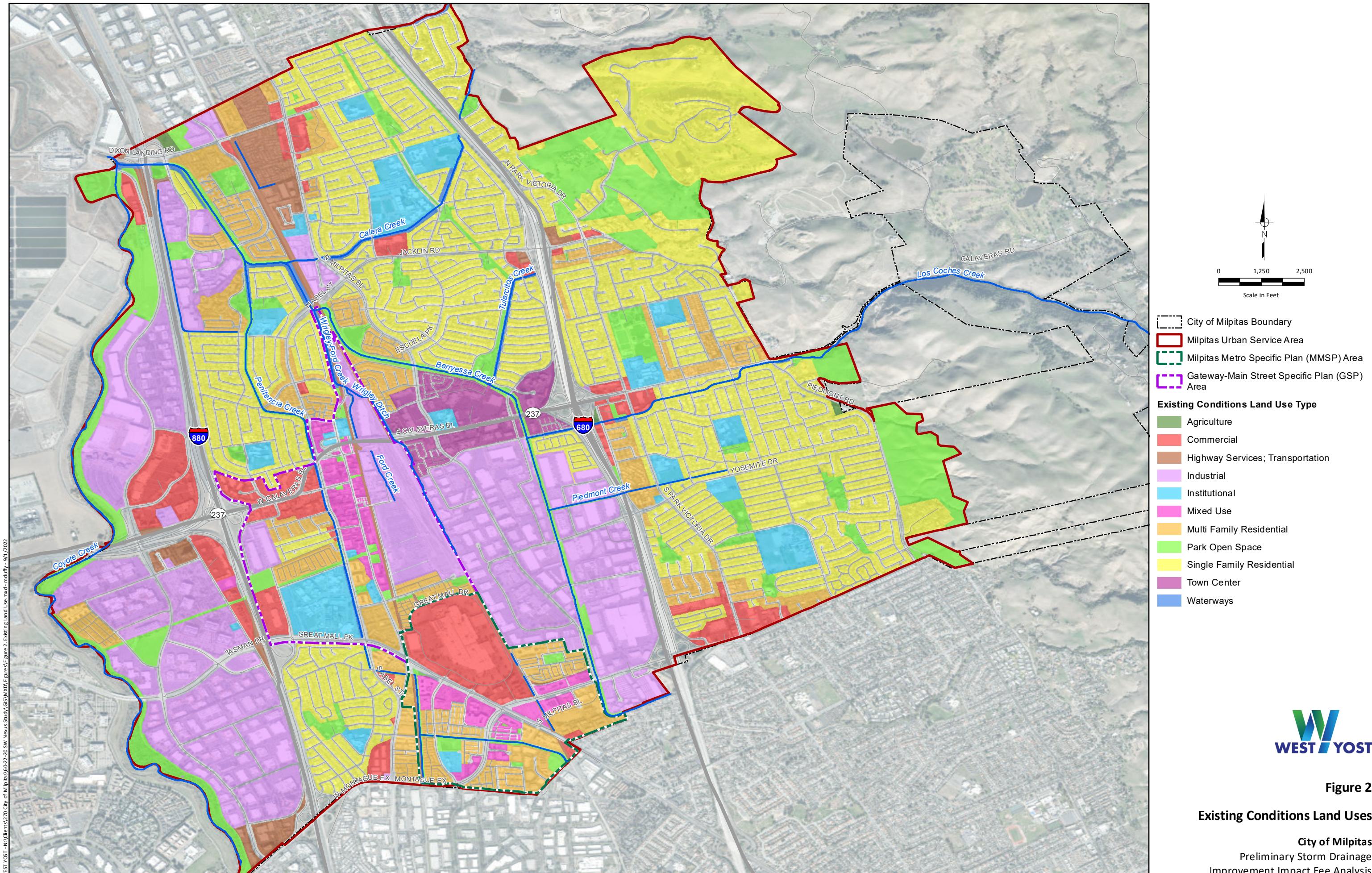


Figure 2

### Existing Conditions Land Uses

City of Milpitas  
Preliminary Storm Drainage  
Improvement Impact Fee Analysis

## IMPACT FEE EVALUATION

The study area boundary is the City's urban service area. The City's urban growth boundary was established in 1998, limiting development in the eastern hill areas. The initiative was set to expire in 2018 but was extended through the passage of Measure I in November 2016. The urban service area is contiguous with the urban growth area, and restricts the extension of public services and infrastructure to new development in eastern areas of the City Limits and sphere of influence. West Yost split the urban services boundary into three smaller study areas for this analysis: the MMSP area, the GSP area, and the remainder of the City's urban service area, as shown on Figures 1 and 2.

### Existing Impact Fee

The basis of the current storm drain connection fee is summarized in Chapter 7 of the City's 2003 Financial Utility Plan. The development impact fees proposed in the 2003 Financial Utility Plan are still being used today. The fee is based on a standard buy-in methodology and is calculated by dividing the value of existing infrastructure plus additional anticipated capital project and equipment costs, by the total potential city-wide stormwater runoff acreage.

#### *Value of Existing Facilities and Master Plan Improvements*

The cost of existing infrastructure used in the fee calculation was estimated to be \$91,157,871 (in 2002 dollars). The cost of the storm drain capacity improvements and near-term equipment was estimated to be \$24,913,000, based on the SDMP developed by Schaaf & Wheeler in July 2001. The combined cost of \$116,070,871 was used as the total cost to be divided across the City in the impact fee calculation.

#### *Existing Runoff Acreage*

The potential city-wide stormwater runoff acreage was calculated based on the area of land that may eventually be developed under each land use category by assigning a runoff factor to each land use category. Runoff factors used for each land use type in the existing fee calculation are summarized in Table 2.

**Table 2. Existing Fee Runoff Factors**

Land Use Category	Runoff Factor
Single Family Residential	0.40
Multi-Family Residential	0.70
Commercial/Industrial	0.90
Agricultural	0.20
Open Space	0.00

#### *Existing Impact Fee Calculation*

By combining the value of the existing facilities and the master plan improvements and spreading the cost across the entire City based on the land use category and runoff factor, the fee calculation results in the current storm drainage impact fee of \$23,880 per acre of impervious surface, or \$55 per 100 square feet (sf).

## Proposed Impact Fee Analysis

West Yost conducted this preliminary storm drainage improvement impact fee analysis to estimate an updated fee based on the Capital Improvement Projects identified in the 2021 Storm Drain Master Plan and to comply with the impact fee regulations in AB 1600. Because the necessary infrastructure improvements vary throughout the City, West Yost recommends implementing a different fee for each of the three study areas: the MMSP area, the GSP area, and the remainder of the City's urban service area.

Impact fees are based on the idea that development should pay for the cost associated with the facilities necessary to accommodate growth. Impact fees are not intended to be used for operational expenses, to pay for city-wide capital improvements, or to correct an existing deficiency or shortfall. For this reason, the proposed impact fee will not include the value of existing infrastructure or the CIP projects that are not directly related to proposed development.

### ***Cost of Master Plan Improvements***

The total cost of the CIPs that are directly related to proposed development or redevelopment was identified for each study area, based on the 2021 SDMP. A breakdown of the CIP costs is summarized in Table 3. There are no CIPs identified in the MMSP area. The total cost of the CIPs associated with new development or redevelopment in the GSP area is \$1,980,000. The total cost of the CIPs for new development in the City's remaining urban service area is \$960,000. Figure 3 shows the CIP project locations and the parcels identified for proposed new development or redevelopment.

Figure 3-3 of the 2021 SDMP (Attachment A) shows locations within the GSP area that are inundated during the 10-year design storm event after incorporating the identified CIP projects. The flooding within the GSP area is due to high creek levels downstream of the storm drain network and can only be resolved by major creek projects. However, most of the major creeks within the City are owned by Valley Water, including Lower Penitencia Creek, which drains a portion of the GSP area. The inundated areas are mostly in streets and empty lots, but there is also minor flooding on residential and commercial properties.

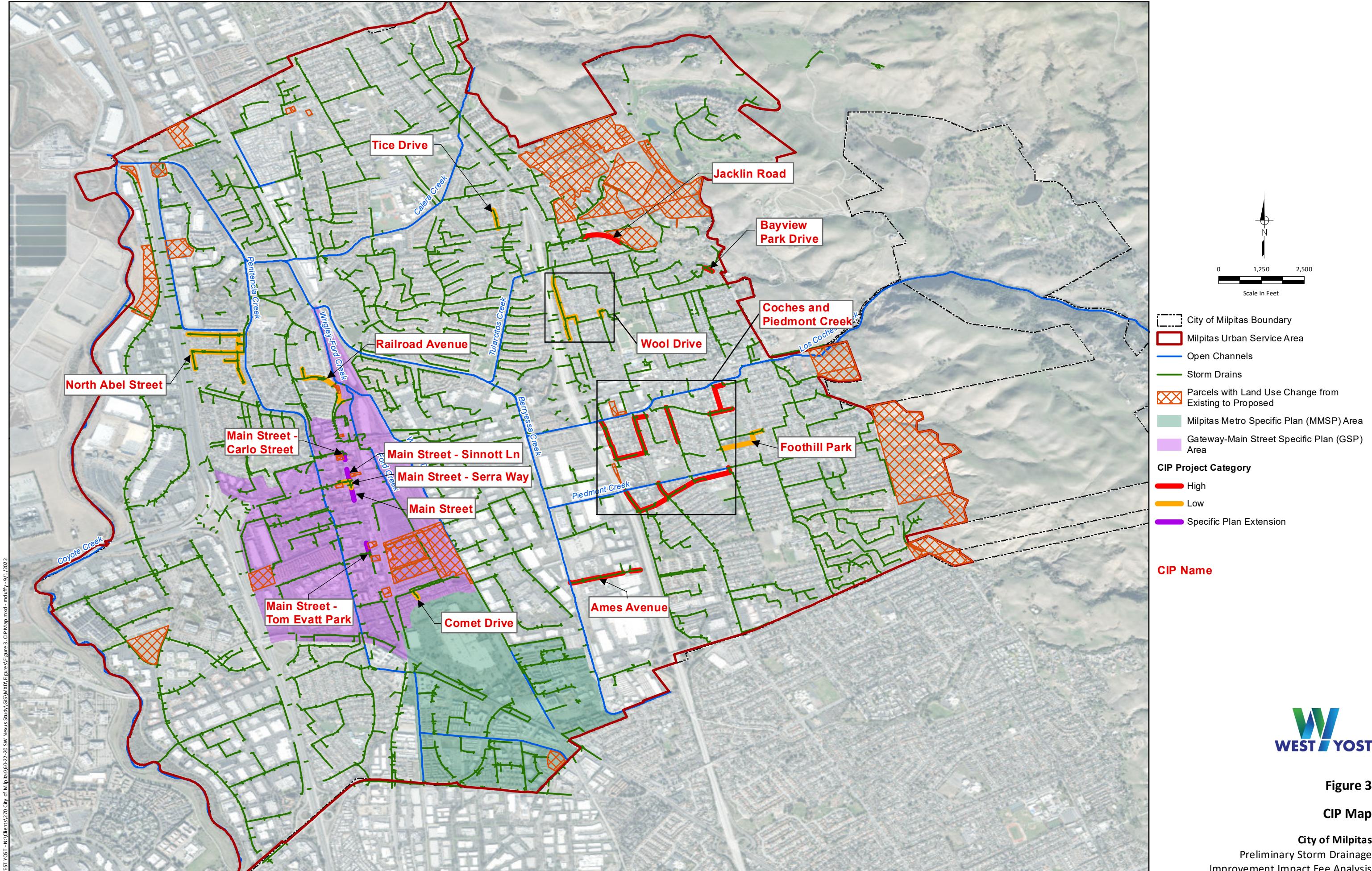
Due to the high creek levels downstream of the GSP area, proposed development will need to mitigate any increases in peak runoff to avoid worsening the flooding in existing inundated areas. Additional infrastructure needed to serve development proposed in the GSP area will be identified with the finalization and adoption of the GSP. In addition, hydraulic modeling of the 10-year and 100-year design storms will be needed to verify the location and sizing of the required infrastructure and show that flooding will not increase.

### ***Proposed Runoff Factors***

Runoff factors used in developing the proposed impact fee are summarized in Table 4. Updates were made from the runoff factors used in the existing impact fee calculations to include additional land use categories and to account for the fact that open space parcels will still have a small amount of runoff. The runoff factors were estimated based on the typical runoff coefficient "C Values" in the City's Design Guidelines.

Table 3. 2021 SDMP CIP Project Cost Summary

Improvement ID	Improvement Name	CIP Category	Percent of Project for Existing City	Percent of Project for New Development	Construction Cost <sup>(a)</sup>	Engineering / Inspection Cost <sup>(a)</sup>	CIP Total Cost <sup>(a)</sup>	Portion of CIP Cost Due to New Development	Notes
Milpitas Metro Specific Plan (MMSP) Area									
No CIP Projects Identified									
<i>Subtotal</i>									
Gateway - Main Street Specific Plan (GSP) Area									
LP_15	Main Street - Tom Evatt Park	Storm Drain Extension		100%	\$150,000	\$30,000	\$180,000	\$180,000	Storm drain extension to area of proposed development
LP_16	Main Street	Storm Drain Extension		100%	\$130,000	\$30,000	\$160,000	\$160,000	Storm drain extension to area of proposed development
LP_17	Main Street - Sinnott Ln	Storm Drain Extension		100%	\$50,000	\$10,000	\$60,000	\$60,000	Storm drain extension to area of proposed development
LP_18	Main Street - Carlo St	Storm Drain Extension		100%	\$90,000	\$20,000	\$110,000	\$110,000	Storm drain extension to area of proposed development
LP_12	Main St - Serra Way	Low Priority		100%	\$240,000	\$50,000	\$290,000	\$290,000	Storm drain extension to area of proposed development
WF_11	Comet Drive	Low Priority	100%		\$160,000	\$30,000	\$190,000	\$0	
WF_13	Railroad Avenue	Low Priority		50%	\$1,970,000	\$390,000	\$2,360,000	\$1,180,000	Only a portion of this improvement drains the proposed development area
<i>Subtotal</i>									
Remaining City Urban Service Area									
BERRY_10	Ames Avenue	High Priority	100%		\$1,390,000	\$280,000	\$1,670,000	\$0	
CAL_2	Jacklin Road	High Priority	0%	100%	\$800,000	\$160,000	\$960,000	\$960,000	Because this is considered to be built-out in the SDMP analysis, unable to determine if it is existing deficiency or due to development - it was assumed to be deficient due to development
CAL_3	Bayview Park Drive	High Priority	100%		\$180,000	\$40,000	\$220,000	\$0	
COCHES_5	S Park Victoria Drive	High Priority	100%		\$9,640,000	\$1,930,000	\$11,570,000	\$0	
INLETS	Inlet Replacements	High Priority	100%		\$1,170,000	\$230,000	\$1,400,000	\$0	
JURGENS	Jurgens Pump Station	High Priority	100%		\$12,500,000	\$2,500,000	\$15,000,000	\$0	
MURPHY	Murphy Pump Station	High Priority	100%		\$250,000	-	\$250,000	\$0	
PENITENCIA	Penitencia Pump Station	High Priority	100%		\$8,000,000	\$2,000,000	\$10,000,000	\$0	
OAK	Oak Creek Pump Station	High Priority	100%		\$250,000	-	\$250,000	\$0	
ABBOTT	Abbott Pump Station	Low Priority	100%		\$1,200,000	\$200,000	\$1,400,000	\$0	
CAL_1	Tice Drive	Low Priority	100%		\$280,000	\$60,000	\$340,000	\$0	
CAL_4	Wool Drive	Low Priority	100%		\$1,930,000	\$390,000	\$2,320,000	\$0	
COCHES_8	Foothill Park	Low Priority	100%		\$860,000	\$170,000	\$1,030,000	\$0	
LP_14	North Abel Street	Low Priority	100%		\$4,250,000	\$850,000	\$5,100,000	\$0	
SPENCE	Spence Creek PS	Low Priority	100%		\$620,000	\$130,000	\$750,000	\$0	
WFC	Wrigley-Ford Creek	Maintenance	Low Priority	100%	\$600,000	\$200,000	\$800,000	\$0	
<i>Subtotal</i>									
<b>Total</b>									
(a) Cost estimates are from the 2021 Milpitas Storm Drainage Master Plan and are in 2021 dollars (ENR Index = 13,500)									



**Table 4. Proposed Fee Runoff Factors**

Land Use Category	Runoff Factor
Single Family Residential	0.40
Multi-Family Residential	0.70
Commercial/Industrial	0.90
Mixed Use	0.50
Transportation/Highway Services	0.95
Town Center	0.90
Institutional	0.90
Agriculture	0.20
Park Open Space	0.20
Waterways	0.00

## PROPOSED IMPACT FEE

The proposed impact fee for each study area is summarized in Table 5 and described below. The impact fee is estimated by dividing the total cost of master plan improvements for each study area by the total runoff acreage for that study area. The total runoff acreage is calculated by multiplying the total area for each land use category in the study area by the runoff factor assigned to that land use category. Runoff factors used for the proposed impact fee are shown in Table 4.

**Table 5. Storm Drain Improvement Fee Calculation Summary**

	Existing City-Wide Storm Drain Connection Fee	Proposed Impact Fee		
		Milpitas Metro Specific Plan Area	Gateway-Main Street Specific Plan Area	Remaining Urban Service Area
Value of Existing Facilities <sup>(a)</sup> (2002 Value)	\$91,157,871	-	-	-
Cost of Master Plan Improvements (2021 Value)	\$24,913,000	\$0	\$1,980,000	\$960,000
Total Infrastructure Cost	\$116,070,871	\$0	\$1,980,000	\$960,000
Acreage <sup>(b)</sup>	8,660	0	57.5	10.0
Total Runoff Acres <sup>(c)</sup>	4,863	0	40.6	4.0
Connection Fee per Runoff Acre	\$23,868	\$0	\$48,768	\$240,000
Connection Fee per 100 sf of Runoff Surface	\$55	\$0	\$112	\$551

(a) The value of existing facilities was not included in the calculation for the proposed impact fee in accordance with AB 1600.  
 (b) Acreage for the existing storm drain connection fee includes the entire city. Acreage for the proposed impact fee in the Gateway Specific Plan area includes parcels proposed to be developed or re-developed. Acreage for the proposed impact fee in the remaining urban service area includes only the area of proposed development that is tributary to a CIP project.  
 (c) Runoff acreage is calculated by multiplying the total acres for each land use category in the study area by the runoff factor assigned to that land use category. Runoff factors are shown in Table 2 for the existing fee and Table 4 for the proposed fee.

## **Milpitas Metro Specific Plan Area**

Because there are no CIP projects identified in the MMSP area, there will not be a proposed impact fee for the study area. If an analysis of the 100-year storm event does identify necessary improvements in the MMSP area, the impact fee will need to be updated.

## **Gateway – Main Street Specific Plan Area**

Based on the City's direction during a meeting on July 1, 2022, all parcels being developed or redeveloped within the GSP area will be assessed with an impact fee, including 46.3 acres that will be redeveloped. Although the imperviousness will decrease with the change from an industrial land use to a multi-family residential land use, the City's storm drain infrastructure will need to be extended to serve this area of redevelopment. The reduction in imperviousness will reduce the total volume of runoff, but the change from sheet flow to piped flow will affect the shape and peak of the runoff hydrograph. In addition, due to the high creek levels downstream of the specific plan area, any changes to land use or infrastructure within the GSP area can impact flooding. The GSP area also includes 11.1 acres of new development, which will convert the existing open space areas to 6.4 acres of commercial development and 4.7 acres of mixed use development. This will increase the imperviousness, resulting in increased runoff.

The GSP area includes 57.5 acres of proposed development or redevelopment. Multiplying the area for each land use category by the associated runoff factor results in 40.6 runoff acres. The cost of the CIP projects that will serve new development and redevelopment in the GSP area is \$1,980,000, resulting in an estimated proposed development impact fee of \$48,768 per runoff acre, or \$112 per 100 sf of runoff surface. Once the GSP is finalized and adopted and the value of additional infrastructure needed for proposed development is determined, the impact fee will need to be recalculated. If an analysis of the 100-year storm event identifies additional improvements needed in the GSP area, the cost of the improvements will also be used to update the impact fee.

## **Remaining Urban Service Area**

The impact fee in the remaining urban service area will apply only to the parcels tributary to CIP projects identified in the 2021 SDMP. In the remaining urban service area, a 10.0-acre site tributary to the Jacklin Road CIP project is proposed to develop from open space to single family residential, increasing the impervious percentage and resulting in 4.0 runoff acres. Distributing the \$960,000 in CIP costs across 4.0 runoff acres results in a proposed impact fee of \$240,000 per runoff acre, or \$551 per 100 sf of runoff surface. If an analysis of the 100-year storm event identifies necessary improvements in the remaining urban service area, the impact fee will need to be updated.

## **NEXUS SUMMARY**

It is recommended that the impact fee be re-evaluated with the adoption of any specific plans or the identification of any new CIP projects that will benefit new development. A summary of how a proposed impact fee can meet the guidelines established in AB 1600 is below.

- **Identify the purpose of the fee.** The purpose of the fee is to provide a source of funding that can be used to construct new storm drainage facilities or improve existing facilities that have been identified as necessary to serve new development and redevelopment in the City. New development in the City will increase impervious surfaces, increasing storm drain runoff and triggering the need for improvements to the existing storm drain system.

- **Identify how the fee will be used.** Fees collected through new development and redevelopment will be used to fund storm drainage infrastructure necessary to serve the development and mitigate impacts downstream or upstream of the new development. This includes extending storm drain pipes to underserved areas of proposed development and CIP projects downstream of proposed development. The CIP projects identified by the 2021 SDMP are shown on Figure 3, along with areas identified for new development and redevelopment. The CIP projects that will drain the development areas and the associated costs are summarized in Table 3. The storm drain impact fee will need to be updated with the adoption of the GSP and identification of additional storm drain infrastructure needed for development.
- **Show a reasonable relationship (nexus) between the fee's use and the type of development project on which the fee is imposed.** As outlined in Table 1 and shown on Figures 1 and 2, new development and redevelopment are proposed throughout the City. All new development is proposed at locations currently identified as open space, meaning that development will increase the impervious coverage. Increasing the impervious coverage will generate additional runoff, creating demand for additional storm drainage infrastructure or improvements. Redevelopment in the GSP area will change the land use type from industrial to multi-family residential. While the land use change does reduce the impervious coverage, reducing the total runoff volume redevelopment will require the addition of storm drain pipes in an area previously drained by sheet flow. This will impact the shape of the runoff hydrograph and affect the peak flow to the downstream facilities. The storm drain infrastructure needs in the GSP area will be identified with the finalization and adoption of the GSP, and the impact fee will be updated at that time.
- **Show a reasonable relationship between the public facility to be constructed and the type of development on which the fee is imposed.** New development will increase the impervious percentage of a project site and generate additional runoff. Figure 3 shows the parcels that are proposed to change land use, and the CIP projects that they are tributary to. The cost of the CIP projects allocated to new development is summarized in Table 3. Development in the GSP area will require the addition of storm drain infrastructure. Once the GSP is finalized and the required storm drain facilities are identified, the impact fee will be updated.
- **Account for and spend the fees collected only for the purposes and projects specifically used in calculating the fees.** Table 3 provides a summary of the CIP costs that are directly related to new development and used for calculating the proposed impact fee for each study area. Once the GSP is finalized and adopted, and the additional storm drain infrastructure is identified, the impact fee will be updated.

To complete an adequate storm drain impact fee assessment that complies with the requirements of AB 1600, specific plans and hydraulic studies should address both the 10-year and 100-year design storm events. CIP projects should identify improvements needed to the storm drain infrastructure, including pump stations and creeks, to ensure that 100-year flood protection is provided. The total cost of the 100-year CIPs will be used to revise the proposed impact fees. To address high water levels in the City's downstream creek system, the City and Valley Water should jointly identify how funds will be collected to construct necessary improvements. Development in specific plan areas may need to contribute to the funding of downstream creek improvements to accommodate growth.

## Attachment A

### Inundation Map

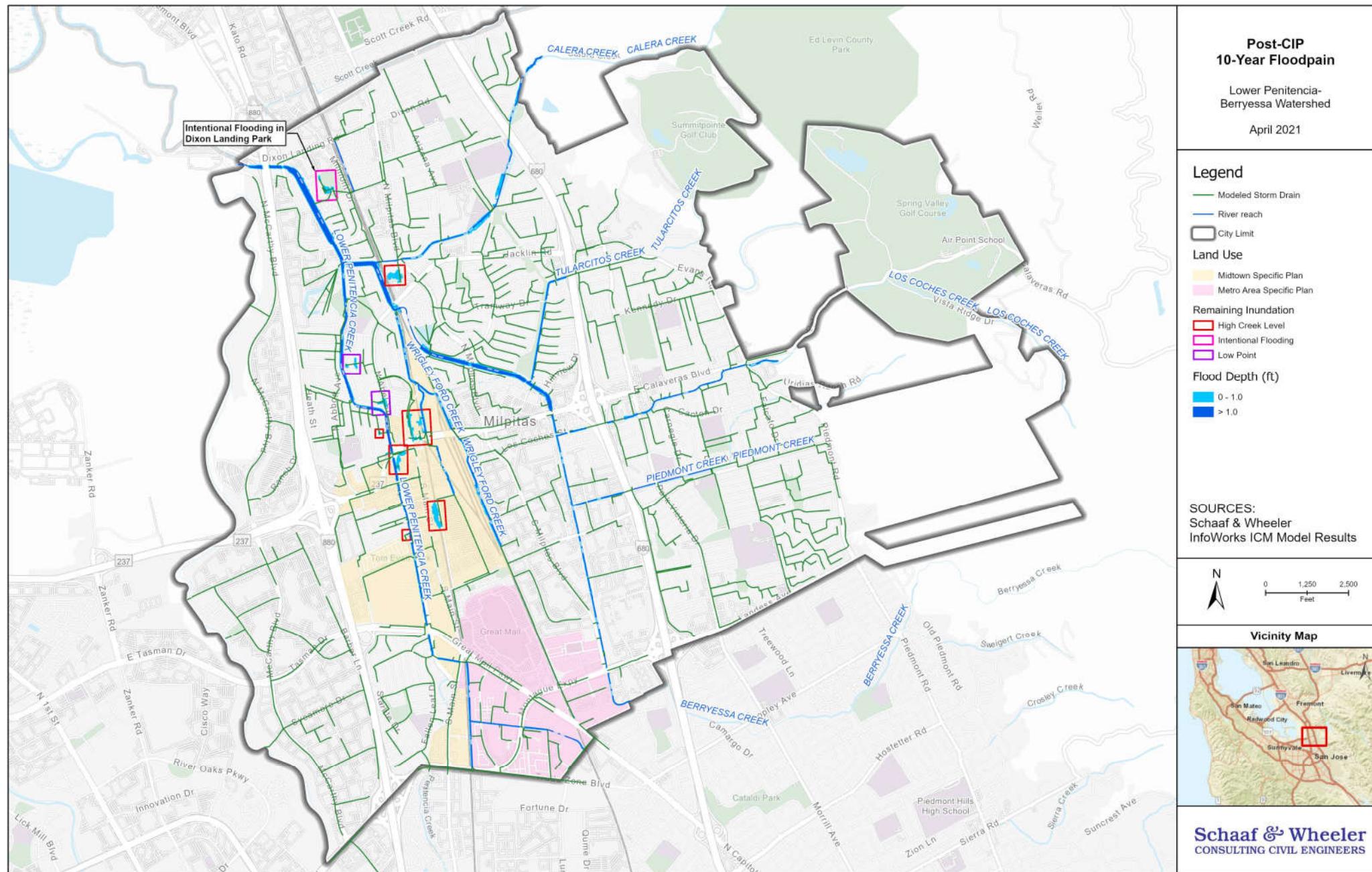


Figure 3-3